

The Baking Forum UK 2025

Javier Lozano Díaz, Bühler AG

Global Product Manager Plant Automation & Digital Solutions

Andrew Thomson, Whitworth Bros Ltd

Regional Milling Specialist



Agenda

Bühler AG – Milling Solutions

- 1 **Technology Radar:** AI
- 2 **Market View:** Bühler's role
- 3 **Strategy:** How to tackle today's challenges

Whitworth Bros. Ltd

- 4 **Whitworth Toolbox:** The importance of a solid foundation
- 5 **Use Cases:** Optimal Water Usage, Grinding, and Overall Quality and Uptime Optimization
- 6 **Making impact:** Whitworth Achievements

Latest Advancements in AI: Reasoning capabilities



Introducing GPT-4.5

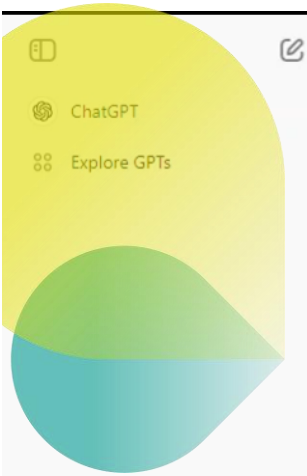
Release Feb 27, 2025



A next-generation language model fine-tuned with **advanced reinforcement learning** for superior complex reasoning.



It refines its internal thought process, generating an **extended chain of thought** before delivering precise answers.



I'll let you be the judge...



- Create a cartoon illustration of my pet
- Quiz me on world capitals
- Message to comfort a friend
- Recipe with what's in my kitchen

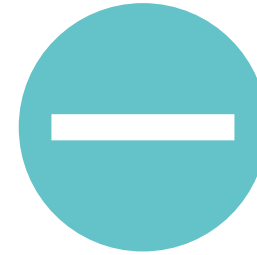
Summary of Key Adjustments



For moisture

Check and adjust the **tempering** process to ensure adequate moisture absorption by the grain.

Investigate the **roller mill heat** and **airflow** to prevent excessive moisture loss.

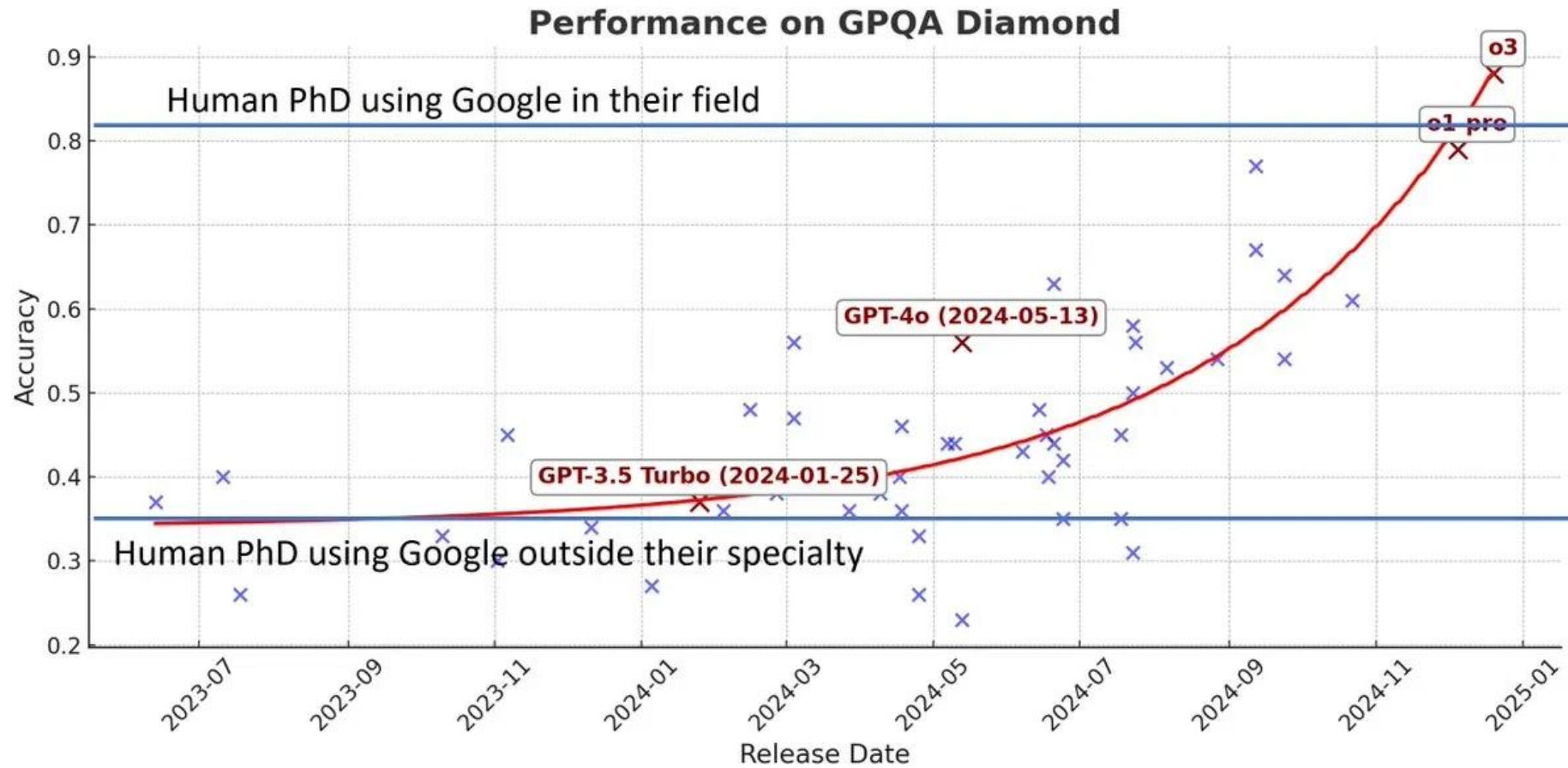


For starch damage

Tighten the **roller gaps** (both in break and reduction rolls) and increase pressure to enhance starch granule rupture.

Ensure the **roller surfaces** are sharp and in good condition for effective grinding.

Key takeaway: The world is changing rapidly, now



Managing multiple challenges and opportunities in parallel



Lack of resources



Footprint



Digitalization and AI



Food security



Geopolitical tensions



Cybercrime



Interest rates



Energy costs



6:30 a.m.

7:15 a.m.

10:00 a.m.

3:00 p.m.

7:00 p.m.

Bühler is part of the **everyday life** of billions of people

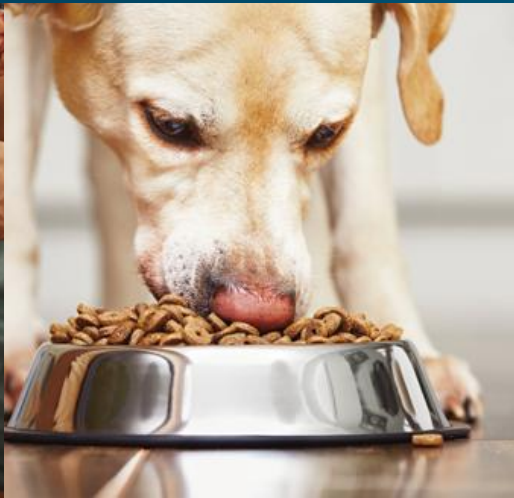
7:00 a.m.

7:30 a.m.

12:00 p.m.

6:00 p.m.

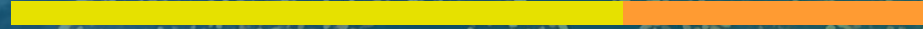
8:00 p.m.



Our relevance in a world of 8 billion people

2 billion

people each day enjoy food
produced on Bühler equipment

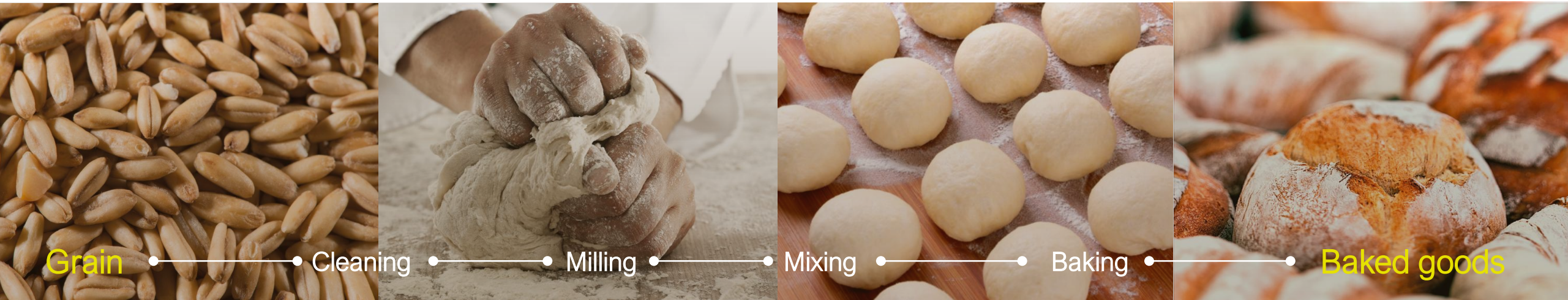


1 billion

people travel in vehicles partly
produced with Bühler machinery

Integrated process solutions for material transformation

From Grains to Finished Products – Bühler's Passion and Commitment for 165 Years



Our Motivation? Contributing to Customer Success and Global Progress



Digitalization and automatization



Integrated value chains



Improve the asset base



Schools and training centers

The True North, The SmartMill.

Three system inputs needed:

- **What** type of flour and characteristics?
- **How** much of it to produce?
- **When** should it be ready?

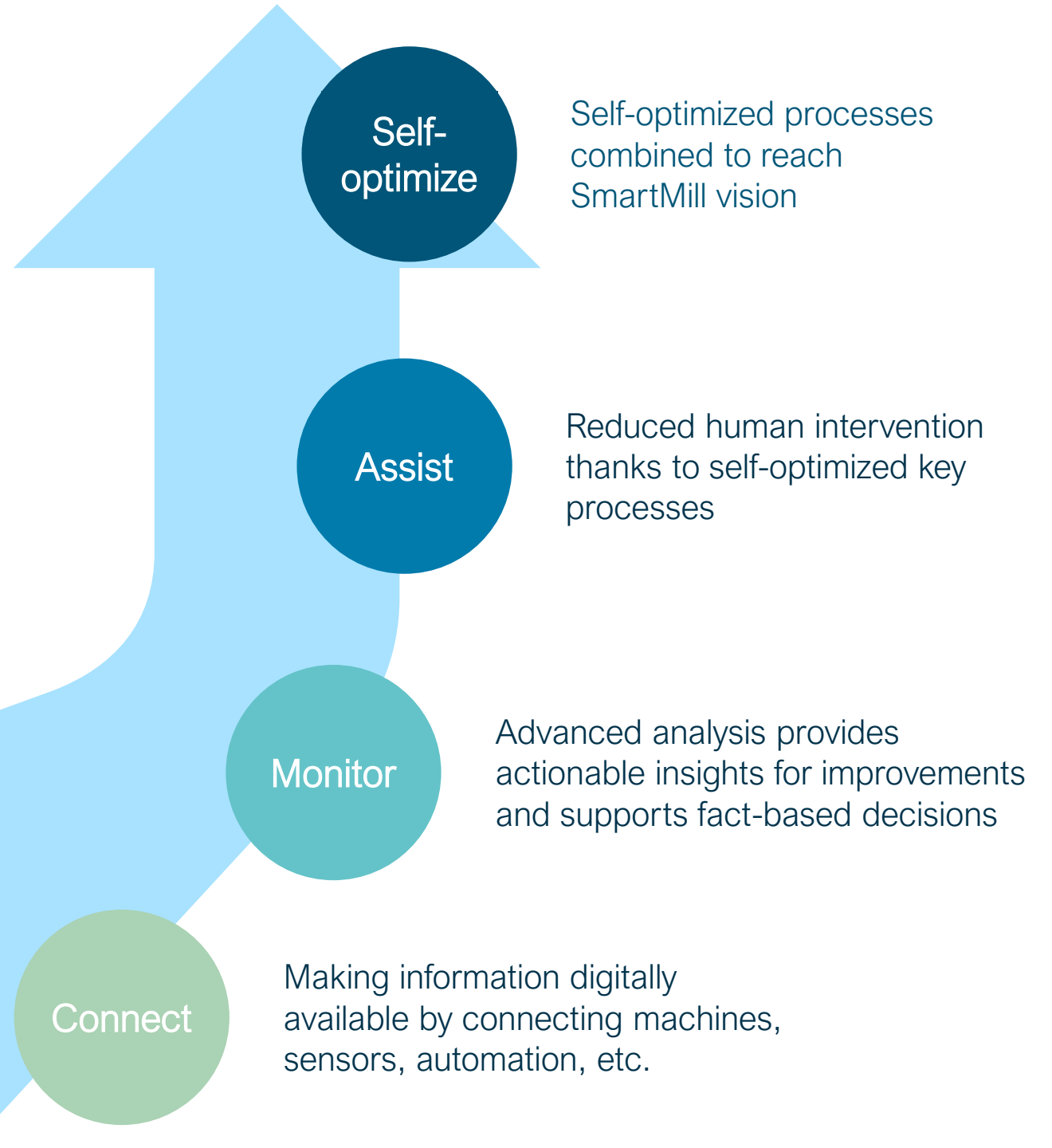
Based on:

- **Data connection and monitoring** as enablers
- **Assistance systems** to optimize non-automated tasks across administration, operations, milling, and maintenance
- **The right industrial expertise** to optimize specific process steps across your business



The SmartMill solution vision

SmartMill is a journey.
A journey to reach the target of **self-optimized mill**, aiming to achieve:



Services, **changing the game**



**Optimize
your footprint**

Energy | Waste | Water



**Improve business
performance**

Productivity | Availability | Transparency | Reliability

Whitworth Bros. Ltd.

United Kingdom

- SmartMill incubator with more than 30'000 data points, allowing most transparent and consistent process, as well as energy savings of up to 8% across the plant
- Approx. 20% building volume reduction, resulting in building investment savings
- Installation time reduction of 12'000 hours, decreasing costs and lead time of the project

30'000
data collection
points

20%
building volume
reduction

12'000
hours installation
time reduction

Whitworth Bros. Ltd. is a traditional family company that has put technological innovation at the heart of its business model. The Whitworths Holdings Limited Milling Group has 17 flour mills across 10 sites. With an annual output of around 1.4 million tons of flour Whitworth Bros. Ltd. is the UK's largest flour producer.

Customer
case

Would you like to know more?

Are you looking for Solutions?

THANK YOU!



Javier Lozano Diaz

Global Product Manager Automation &
Digital Solutions MS

javier.lozano@buhlergroup.com

Phone +41 764040071

Bühler AG
Switzerland



We will be pleased to help you!